

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the present application.

Listing of Claims:

1. **(Previously Presented)** A method of differentiation from an embryonic stem cell of a primate into a hematopoietic cell, said method comprising:

maintaining an embryonic stem cell of a primate under conditions suitable for induction of differentiation into a hematopoietic cell,

transplanting the resulting cell into a fetus in a uterus of a pregnant sheep,

rearing the fetus,

administering a cytokine specific for a primate to a born lamb, and

obtaining a hematopoietic cell of a primate from a sheep obtained by rearing the lamb.

2. **(Original)** The method according to claim 1, wherein the method comprises the steps of:

(I) maintaining an embryonic stem cell of a primate on a feeder cell, the feeder cell being a stromal cell strain deficient in macrophage colony-stimulating factor, and

(II) transplanting a primate-derived cell obtained in the step (I) into a fetus in a uterus of a pregnant sheep, and rearing the fetus to birth.

3. (Original) The method according to claim 2, wherein in the step (I), an embryonic stem cell of a primate is maintained on a feeder cell in the presence of bone morphogenetic protein 4.

4. (Original) A method for producing a hematopoietic cell of a primate, comprising the steps of:

(I) maintaining an embryonic stem cell of a primate on a feeder cell, the feeder cell being a stromal cell strain deficient in macrophage colony-stimulating factor,

(II) transplanting a primate-derived cell obtained in the step (I) into a fetus in a uterus of a pregnant sheep, and rearing the fetus to birth, and

(III) administering a cytokine specific for a primate to a lamb born in the step (II), and separating a hematopoietic cell of a primate differentiated from the embryonic stem cell of a primate from a sheep obtained by rearing the lamb.

5. (Canceled)

6. (Previously Presented) A method for producing a chimeric sheep which produces a hematopoietic cell of a primate, said method comprising:

maintaining an embryonic stem cell of a primate under conditions suitable for induction of differentiation into a hematopoietic cell,

transplanting the resulting cell into a fetus in a uterus of a pregnant sheep,

administering a cytokine specific for a primate to a born lamb, and

rearing the lamb.

7. (New) A method of differentiation from embryonic stem cells of a primate into hematopoietic cells, said method comprising:

maintaining embryonic stem cells of a primate under conditions suitable for induction of differentiation into hematopoietic cells,

transplanting the resulting hematopoietic cells into a fetus in a uterus of a pregnant sheep;

rearing the fetus;

administering stem cell factor specific for a primate to a born lamb; and

obtaining CD45⁻ hematopoietic cells of a primate from a sheep obtained by rearing the lamb.

8. (New) The method according to claim 7, wherein the method comprises the steps of:

(I) maintaining embryonic stem cells of a primate on a feeder cell layer, the feeder cells comprising a stromal cell strain deficient in macrophage colony-stimulating factor, and

(II) transplanting a primate-derived cell obtained in the step (I) into a fetus in a uterus of a pregnant sheep, and rearing the fetus to birth.

9. (New) The method according to claim 8, wherein in the step (I), an embryonic stem cell of a primate is maintained on a feeder cell in the presence of bone morphogenetic protein 4.